DOCUMENT RESUME

ED 426 934 SO 029 855

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TITLE The Darwinian Center to the Vision of William James.
PUB DATE 1998-00-00
NOTE 18p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Diego, CA, April 13-17, 1998).
PUB TYPE Opinion Papers (120) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Evolution; Influences; *Intellectual History; *Philosophy; *Psychology; *Scholarship
IDENTIFIERS *Darwin (Charles); *James (William)

ABSTRACT

The essence of William James's vision can sometimes be hard to discover due to emotional volatility and exploratory impulsiveness. On the other hand, beneath James's apparent inconsistency was a constancy of purpose that can be easily underestimated. This paper argues that the center of James's vision lay in an interpretation of Darwinism. By drawing specific connections between James and Darwin, the paper seeks to make James's overall approach clearer and to relate a variety of seemingly disparate themes within it. First the paper explores James's emotional concerns. Next the paper considers Charles Darwin's influence on James' thinking. The paper questions what it means to be "Darwinian," especially when considered philosophically, examining Darwin's accomplishments. According to the paper, Darwin introduced and legitimized a number of intellectual innovations that have become so familiar today that their radical character often goes unrecognized. Contending that pragmatism can be viewed as the generalization of Darwinian philosophy to human social and moral affairs, to see how James used Darwin's ideas, the paper first considers James's work in psychology and then in philosophy. The paper concludes that James tackled the problems facing him by adopting a version of an evolutionary philosophy. (Contains 20 notes and 33 references.) (BT)

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The Darwinian Center to the Vision of William James*

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William James once wrote that "Any author is easy if you can catch the centre of his vision" (Lovejoy, 1911, 126). Unfortunately, the center of James's own vision can sometimes be hard to catch. As his biographer, Ralph Barton Perry, noted, "The power of his mind lay largely in its extreme mobility, its darting, exploratory impulsiveness. It was not a mind which remained stationary, drawing all things to itself as a centre; but a mind which traveled widely--now here and now there--....making up in the variety of its adventures for what it lacked in poise" (Perry, 1935, 66). One can see this quality in James's writing, where sometimes asserts one thing at one point, then contradict himself while caught in enthusiasm for another point. James could also be unsystematic, and in fact was so on principle. As he warned in the introduction to his Principles of Psychology, "The reader will in vain seek for any closed system in this book" (James, 1952/1890, xiv). The combination of a certain emotional volatility and lack of system has often led James to be misunderstood.

On the other hand, beneath James's apparent inconsistency was a constancy of purpose that can be easily underestimated. He explored things from an attitude or orientation that brought considerable consistency to his work, even if somewhat paradoxically (since his attitude was one that valued varying attitudes). In what follows I argue that the center of James's vision lay in an interpretation of Darwinism. This may seem obvious, since James has often been viewed as influenced by evolutionary thought, but it is rarer for this point to be followed though in any detail so that one can see just *how* Darwinian ideas figured in his work. By drawing more specific connections between James and Darwin I hope to make James's overall approach clearer and to relate a variety of seemingly disparate themes within it.

There are other reasons for bringing Darwin back into the picture at this time as well. First, now that pragmatism is experiencing a resurgence reviewing its connections to evolutionary theory helps in understanding it as an intellectual movement, as both Dewey and Mead were at pains to point out. Second, it deepens pragmatism itself by relating it to theory in the natural sciences, and not just to cultural post-modernism. Finally, Darwinian ideas are also resurgent today, due in part to new advances in biology. These ideas are coming back into psychology, often at the hands of scholars who adopt reductive approaches (Wilson, 1980; Dennett, 1995). This has led to some debate between "evolutionary" and "cultural" psychologists (Cole, 1996). Since James dealt with similar debates between reductive Spencerians and holistic Hegelians, it may be timely to reconsider this thinking today.

James's Emotional Concerns

Before exploring the influence of Darwin on James, however, I would like to set the stage by first examining James's emotional concerns. James invited this approach when he argued that commitments to philosophical systems are emotional at base (James, 1963/1907). Every philosophy was for him an articulation of an emotional stance, however covert. Thus finding James's central emotional concerns may be as important as finding the origins of his intellectual ideas. Indeed, it may be another way of doing much the same thing.

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* Presented at the American Educational Research Association meetings, San Diego, CA, April 13-18, 1998.

One of the strongest emotional overtones in James's work seems to have been fear of confinement. Simply put, James was something of a claustrophobe (Perry, 1935, 219,232). As his sister Alice wrote, "William expressed himself and his environment to perfection when he replied to my question about his house in Chocurua. 'Oh, it's the most delightful house you ever saw; it has fourteen doors, all opening outwards.' His brain isn't limited to fourteen, perhaps unfortunately" (Dewey, 1946a, 380). This feeling recurs in James's continual protest against closed systems and deterministic schemes that leave one trapped with no way out. His reaction to Hegelian absolutism is an example: "The 'through and through' universe (of the Hegelian system) seems to suffocate me with its infallible impeccable all-pervasiveness. Its necessity, with no possibilities; its relations, with no subjects, make me feel as if I had entered into a contract with no reserved rights, or rather as if I had to live in a large seaside boarding-house with no private bedroom in which I might take refuge from the society of the place" (James, 1992a, 1018-1019). James's "neurasthenia," to which Perry and others refer, may have been a form of panic attack brought on by the thought of being trapped or confined.[1]

James reacted in related fashion to any line of thought that denied the uniqueness of every individual. He continually sought to leave room for individual variation and placed a value on uniqueness. In "The Will to Believe," for example, he argued that people should be allowed to adopt whatever fundamental beliefs they chose as long as they were willing to bear the consequences (James, 1956/1896). In "Great Men and Their Environments" he argued that individual variation is the source of social progress, making being different of potential social value (James, 1956/1897).

In place of deterministic and stereotypical systems, James sought to vitalize and personalize things, to *enliven* them. As he once put it, his principal bogey was "desiccation" (Dewey, 1946b, 386). He sought to revivify thought by arguing in favor of conceptions that gave a strong role to human action and individual uniqueness. Both Spencerianism and neo-Hegelianism came in for special criticism in this regard because of the passive roles in which they placed people, one viewing people as conforming to natural laws, the other seeing their behavior as an expression of Absolute Spirit. Neither gave a sufficient role to human action or to novelty. James interpreted the role of philosophy in terms of such enlivenment, declaring that "Philosophic study means the habit of always seeing an alternative, of not taking the usual for granted, of making conventionalities fluid again, of imagining foreign states of mind" (Dewey, 1946b, 388; Perry, 1935, 215).[2]

While James reacted against deterministic and stereotypical lines of thought, he did not neglect constraint or universality. As Dewey noted, "all the determining *motifs* of his philosophy spring from his extraordinarily intense and personal feeling for the work of the individual, combined, however, with an equally intense realization of the extent to which the findings of natural sciences (to which he was loyally devoted) seemed hostile to rational justification of the idea that individuality as such has any especial value..." (Dewey, 1946a, 329-393). Thus his work deals with the tension between the individual and universal and that between freedom and determinism, or, as he preferred to phrase the issue, between chance and necessity. In more everyday terms, the tension he dealt with involved how the old sense of certainty and human moral

[1] James's depression of 1869 and 1870 is often taken as an indication of his emotional constitution. It seems as though lack of structure and an unclear future led to a depression some months after he had passed his medical examination with no intention of going into medicine (Perry, 1935, 114). It was at this point that first formulated his pluralistic stance between optimistic religious belief that the individual can be totally aligned with the universe, and pessimistic feelings of separation between individual part and universal whole: "Can one with full knowledge and sincerely ever bring one's self to so sympathize with the total process of the universe as heartily as assent to the evil that seems inherent in the details? Is the mind so purely fluid and plastic? If so, optimism is possible. Are, on the other hand, the private interests and sympathies of the individual so essential to his existence that they can never be swallowed up in his feeling for the total process,--and does he nevertheless imperiously crave a reconciliation or unity of some sort. Pessimism must be his portion. But if, as in Homer, a divided universe be a conception possible for his intellect to rest in, and at the same time he have vigor of will enough to look the universal death in the face without blinking, he can lead the life of moralism (Perry, 1935, 120-121). James declared that "My first act of free will shall be to believe in free will" (Perry, 1935, 121). This decision is often viewed as instrumental in resolving James's depression, but I would be more inclined to attribute its cessation to changes in his practical circumstances, such as his being hired to teach physiology at Harvard in 1872, which gave him a structured outlet for his energies.

[2] Elsewhere James gave an alternative interpretation based on his conception of the pragmatic method: "The whole function of philosophy ought to be to find out what definite difference it will make to you and me, at definite instants of our life, if this world-formula or that world-formula be the true one" (James, 1963/1907, 24).

influence represented by religion could be squared with the new discoveries and moral uncertainties raised by science. Since I want to suggest that Darwinian ideas played a large role in James's attempts to solve these problems, it is important to consider the influence of Darwin on his thinking.

Evolutionary Influences

Evolutionary thought was pervasive in the United States when James was a young man (Miller, 1968). Three principal forms of evolutionary thought were in play: Neo-Hegeleianism, Spencerianism, and Darwinism. To put the matter succinctly, Hegel was a holist, Spencer a reductionist, and Darwin a more complicated character that one might call something of a pragmatist.

James was influenced by Spencer at an early stage, although conversations with his friend Charles Saunders Peirce seem to have lessened Spencer's hold on him.[3] He used Spencer's Psychology in his first undergraduate course in the subject in 1876. Even so, he wrote at the time, "I am completely disgusted with the eminent philosopher (Spencer), who seems to me more and more to be as absolutely worthless in all *fundamental* matters of thought, as he is admirable, clever and ingenious in secondary matters. His mind is a perfect puzzle to me, but the total impression is of an intensely two and sixpenny, paper-collar affair" (Perry, 1935, 144). As Perry suggested, Spencer's work served James as a "teething ring" which he "outlived as an incident of his philosophical infancy" (Perry, 1935, 154).

James seems to have been less touched by Hegelian thinking, even though he was early surrounded by New England Transcendentalists who shared similarly Romantic and Idealistic tendencies.[4] Josiah Royce, a younger neo-Hegelian whom James had helped to get a job at Harvard, became a neighbor and friend. James learned from Royce and reacted negatively to neo-Hegelianism, although he mellowed in some of his reactions later on.

What incensed James about both Spencerian Social Darwinism and Hegelian Absolute Idealism was their determinism and denial of individual uniqueness. Spencer saw human beings as behaving in conformity to universal laws and natural selection as eliminating unfit individuals, i.e., those who did not conform. For neo-Hegelians the outcome of history was predetermined and every tragedy for an individual was "rational" because it would ultimately lead to the Good. James has some wonderful passages in which he makes fun of this view which is so insulating from the suffering of others. Much of James's work was directed against Spencerians and neo-Hegelians. Indeed, one can see him as continually defending a largely Darwinian position against these competitors.

Darwin became the central influence on James, as Edward Reed recently affirmed: "Much of James's psychological theorizing bears the stamp of an early and deep adherence to Darwin's ideas. Even when James worked on topics removed from Darwin's area of interest there is strong evidence of Darwinian influence" (Reed, 1997a).[5]

When James went to Harvard for his scientific and medical training, it was the center of intellectual debate on evolution: "It was in science, and especially in the field of biological science, that Harvard was most contemporary and prophetic; and it was this emancipating influence, among all the forces of his time and place, that most deeply affected William James during the years of his university studies" (Perry, 1935, 65).

James began his work at Harvard in chemistry, but soon changed to the Department of Comparative Anatomy and Physiology in the Lawrence Scientific School (a new school at Harvard) with the aim of making natural history his subject (Perry, 1935, 66, 72). There he studied for a year under Jeffries Wyman, a professor of anatomy. James was attracted to Wyman for his "unmagisterial manner" and his "accuracy and thoroughness," viewing him as a paragon of scientific saintliness (Perry, 1935, 67-68). Wyman tended to favor the Darwinian account, but approached the whole issue cautiously and

[3] Spencer tended to be a reductionist, emphasizing the ways in which the properties of the *part* determine those of the whole. His social philosophy was based on the individual as the primary unit of social evolution.

[4] His father was a friend of Emerson, who often visited the house. His two younger brothers also went to a Transcendentalist school.

[5] It is worth noting that James's family friend and older peer, Chauncey Wright, had written defending Darwin, engaged in correspondence with him, and was viewed very favorably in the Darwinian circle in England (Irvine, 1955/1963). Wright's essay, "Evolution of Self-Consciousness" contributed to James's later view of the biological role of thought (Perry, 1935, 128).

without drawing hasty conclusions (Croce, 1995). James also came in contact with Louis Aggasiz at Harvard, one of the principal critics of Darwinism. Edward Reed recently summed up the situation as follows:

> The only prominent psychologist of his day to have studied comparative anatomy, James had been a pupil of both Jeffries Wyman and Louis Aggasiz at Harvard during the 1860's, when they were in the middle of their heated debate over Darwinism. Wyman was the second most important Darwinian in the United States after Asa Gray, who was also at Harvard and also part of this vicious intellectual battle. Aggasiz was perhaps America's most distinguished naturalist, and certainly its fiercest anti-Darwinian. When James joined Aggasiz in a collecting expedition in Brazil in 1865-66 (designed in large part to prove Aggasiz's theory of fish taxonomy against Darwin's—a goal that could not be, and was not met), he was repelled by Aggasiz's unwillingness to consider Darwin's views. Thirty years later James still remembered the verbal tongue-lashing the distinguished professor gave to the twenty-three-year-old who dared to defend Darwin. (Reed, 1997b, 204)

As James wrote to his brother Henry in 1868: "The more I think of Darwin's ideas the more weighty do they appear to me, though of course my opinion is worth very little--still, I *believe* that that scoundrel Aggasiz is unworthy either intellectually or morally for him to wipe his shoes on, and I find a certain pleasure in yielding to the feeling (Perry, 1935, 102).

When James left the Lawrence School of Science to enter the medical school, he continued to be supervised by Wyman. After receiving his medical degree, James was hired to teach physiology at Harvard, which he continued to do for five years. He even replaced Wyman after the latter's death, becoming briefly the head of the physiology department. It was only after he entered the philosophy department later on that he taught psychology. As James recalled, "I originally studied medicine in order to be a physiologist, but I drifted into psychology and philosophy from a sort of fatality. I never had any philosophic instruction, the first lecture on psychology I ever heard being the first I ever gave" (Perry, 1935, 78). James's first course in psychology (in 1875) focused on the relation between physiology and psychology, the same issue he was later to pursue in great detail in his Principles of Psychology.

James's work in physiology is significant, particularly given the centrality of the debate on evolution at the time, because it shows how deeply he was immersed in Darwinian thinking. As Perry put it, in his teaching "he drew most heavily upon what he had learned from Wyman. The first philosophical problem to which he devoted himself systematically was the problem of evolution, and here also it was the same teacher who had first shown him the way" (Perry, 1935, 68).

While nineteenth century evolutionary debate often seemed to turn on the issue of science versus religion, with Spencer considered to be a representative of the more scientific end of the spectrum and neo-Hegelians the more religious end, the issue was actually more complex than this. As Dewey emphasized (Dewey, 1997/1910) and Croce (1995) has recently reemphasized, the problem of dealing with uncertainty and indeterminism was inside of science itself and not just an external issue regarding religious considerations. Darwin was among those working out a new approach to science which could better accommodate uncertainty and indeterminism by using such innovations as probabilistic and hypothetical reasoning. Thus, rather than seeing Darwin as aligned against religion with scientific reductionists and materialists, such as Spencer and Huxley, one might better view him as opposing both religious *and* scientific dogmatism.[6] James's affinity for Darwinian can thus be seen as having deep roots in his own reaction to dogmatic and deterministic thinking.

Darwinian Ideas

There is ample evidence, then, that James was influenced heavily by Darwinian thinking. But what does it mean to be a Darwinian, especially when considered philosophically? Darwin introduced and legitimized a number of intellectual innovations that have become so familiar today that their radical character often goes unrecognized.

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[6] While Huxley is generally viewed as very close to Darwin, as indeed he was, he adopted a more reductive and materialistic approach to human behavior than did Darwin. Huxley viewed human beings as automata, leading Darwin to tease that if this were so he wished there were more automata about like Huxley (Irvine, 1955/1963).

Let me focus on three of the most important ideas for present purposes.

First, Darwin argued that species evolve rather than being immutable. This is a commonplace today, but as Dewey argued one needs to recognize that it overthrew two thousand years of philosophy (Dewey, 1997/1910). In Platonic and Christian thought "Being" was traditionally placed above "Becoming." The emphasis was on the way things are, on their eternal and universal form rather than on changes or variations from this form. The true, eternal, or final character of a thing (Being) was then used to explain its present and concretely varying character (Becoming). Darwin reversed this priority, viewing forms as emergent from a series of historical and contingent life events. "Being" was explained by "Becoming," rather than the reverse. One can see the depth of *philosophical* aim in Darwin's work by remembering that "species" is the Latin word for "form." Thus, when Darwin wrote about "the origin of species" he was writing about the origin of form itself. In effect, his wider intellectual target was formalism.

Second, Darwin suggested that change in organic form occurs because of variation and selection ("descent with modification through variation and natural selection" (Darwin, 1963/1859, 442)). This seemingly obvious point, which was one of Darwin's central contributions, argued against both traditional Deistic thought, which viewed forms as caused by God or Mind, and against traditional Newtonian or mechanistic thought, which took the form of elementary bits of matter as fixed. Darwin's view suggested that form changes through a cyclical process in which there is negative feedback (Bateson, 1972). Organic forms are analogous to a varied set of experiments which are "corrected" by elimination, future variants drawing their characteristics from the group of survivors. This view allowed one to see how functional changes in form could occur without a designer and through processes that were not mechanical in the Newtonian sense, thus evading the predominant dualism of the time.

Thirdly, Darwin conceived of species in populational rather than typological terms (Mayr, 1997). A species is a population of unique individuals that interbreed and share common ancestors, not a set of individuals all of whom share certain abstract properties. Seen in this way, a species is a *statistical* concept. The members of a species may have certain average properties, but this is a statistical characteristic of a population, not an essential set of traits of each member. Populational thinking is necessary to understand change in species, for if species are to change there must be some way for them to change somewhat without thereby necessarily becoming a new species. (Otherwise there would be a virtually infinite set of species.) A populational approach makes it possible to see how individual organisms can be unique and still be members of the same species.[7] From a philosophical point of view, Darwin's populational approach can be seen as a form of anti-essentialism one hundred and forty years before Rortyan anti-essentialism.

Darwin adopted other principles of thought which will be given less emphasis here, although they also figured in James's work. He adopted the principle of continuity, borrowed from Lyell. Continuity meant that a scientific account must explain how organisms change from one form to another without presupposing saltations, or sudden, inexplicable appearances, to accont for the change. Explanations must account for successive changes in form, making the appearance of a later species rationally comprehensible in terms of a series of changes from an earlier one. In fact, Darwin suspected, but could not prove, that all of life was descended from a single original species so a complete story would trace everything back to a single origin. Continuity served as a version of Occam's razor for Darwin's thought, keeping explanations simple by not multiplying origins. Darwin also introduced analogical and plausible reasoning in science (Croce, 1995). He argued that changes in animal form created by human breeding and natural selection were similar, and attempted to support his interpretation of events by its plausibility rather than its logical certainty.

The Darwinian notions of evolving forms, change through variation and selection, and populational thinking, may seem obvious today, however, we may not appreciate how radical a thinker Darwin truly was (Mayr, 1997). Darwin can be viewed as proposing a new philosophy using organic evolution as an example with which to upend two thousand years of Western philosophy. Defining species in functional and populational terms gave an important role for individual

[7] As Dewey put it, applying this principle to education, each pupil in a school "is a member of a unique class" (Dewey, 1916).

variation while still retaining higher order units. Explaining the cause of change in terms of variation and selection is still radical in the social sciences, which tend towards mechanical power theories or theories of rational choice. In short, Darwin developed a philosophy from which we might still learn.

Darwin's approach can be seen as custom made for helping James address his central problems, since the Darwinian account was able to integrate individuality and commonality and chance and necessity.[8] James borrowed a great deal from Darwin, including these concepts. Indeed, pragmatism can be viewed as the generalization of Darwinian philosophy to human social and moral affairs. To see how James used Darwinian ideas let me first consider his work in psychology and then move on to his philosophy.

James's Psychology

James's psychology was an attack on both mechanistic and spiritualistic theories of the mind. As he put it, "This book...rejects both the associationist and the spiritualist theories, and in this strictly positivist point of view consists the only feature for which I am tempted to claim originality (James, 1952/1890, xiii)." One could see these two opponents as represented by Spencer and Hegel, although there were many other representatives as well.

The mechanistic or associationistic theory tended to see mind as a mere side-effect of the interaction of physical objects. This line of thought evolved from Descartes, who thought animals automata, and from Locke, who thought all knowledge came from elementary sensations generated by the interaction of external objects and the body's sensory system. In contrast to this view, spiritualists or idealists viewed thought as result of the active operation of the soul, or as a reflection of Divine Mind. This approach derived primarily from scholastic thought, from Descartes, who thought men differed from beasts because they had immaterial souls, and from Kant, who emphasized the mind's constitutive powers.

James rejected both views. As Reed put it recently, "James wanted to reject both the active-but-unnatural mind of the idealists and the natural-but-passive mind of the associationists" (Reed, 1997a, 6). James argued that both views begin with given *entities*, such as objects that interact or an immaterial ego. While one can *describe* things from both physical and mental standpoints, and seek to relate a physical description of the state of the whole brain to phenomenally apparent ideas, it was an "unwarrantable impertinence" to suggest that one had the ultimate units for an explanatory account (James, 1952/1890, 90).

Darwin provided the beginnings of a middle way between these two accounts of mind. For Darwin mental capacities were the product of a mindless evolutionary process. They were entirely natural, not supernatural. On the other hand, mind need not be interpreted as passively as Spencer had portrayed it, as though it merely reflected the world. Animals have emotions—interests—that result in their responding in certain ways not directly determined by their immediate environments. As James developed this account, mind was primarily a matter of selective attention or emphasis, rather than a passive mirror of things as they are. Thus mind could play an active role in behavior and not be simply determined by immediate external conditions, yet it could also be entirely natural, and, indeed, a mere part of nature. It could be both active *and* natural. However, this interpretation required a new account of the functioning of the brain and nervous system which was neither merely mechanical in a Newtonian sense while also avoiding covertly smuggling in unobservable entities like mind or soul or spirit to explain thought.

Physiology

James's physiology was primarily a reaction to mechanism and reductionism. As noted earlier, mechanists like Huxley tended to view human beings as mere automata.[9] Reductionists, like

[8] Tensions within Darwin's own account should be acknowledged. If individual organisms are qualitatively unique how can there be continuous variation in form as one descends from another? How can particle-like individuality be squared with wave-like continuity? Darwin recognized this problem and was unable to solve it. The issue was later resolved by the introduction of Mendelian genetics into the discussion. It then became clear that particle-like individuality (unique combinations of genes) can be consistent with wave-like continuity at the populational level (statistical changes in the genetic composition of whole populations).

[9] Huxley wrote that,"The consciousness of brutes would appear to be related to the mechanism of their body as simply a collateral product of its working, and as completely without any power of modifying that working as the steam-whistle which accompanies the work of a locomotive engine is without influence on its machinery....to

Spencer, saw mind as composed of elementary sensations, thus suggesting that there were little bits of mind or consciousness latent in the nerves all the way down.

James objected to the dogmatism of both positions. The mechanists insisted that only material causation was allowable, "as if Hume, Kant, and Lotze had never been born" (James, 1952/1890, 90). The atomists, or "mind-stuff" theorists, gave an account that physiologically implausible since it did not properly account for the contributions of higher order neural systems. James viewed mind in a more active and holistic way than was evident in either of these accounts. This did not mean that he wanted to go all the way to the other end of the spectrum and posit a soul, though at times he went in for this, but he realized that this *explained* nothing beyond the phenomena themselves.

Rather than appealing to either atomistic sensations or to the operations of a soul, both of which posited metaphysically given entities, James suggested that "consciousness" was a function, not a thing. Considered as a function, consciousness was "primarily a selecting agency" (James, 1952/1890, 91). Mental functioning involved selecting means for the attainment of ends: "The pursuance of future ends and the choice of means for their attainment are...the mark and criterion of the presence of mentality in a phenomenon....no actions but such as are done for an end, and show a choice of means, can be called indubitable expressions of mind" (James, 1952/1890,5,6-7). This conception of the mental gave James a way of shooting in between the mechanistic and spiritualistic views. Unlike the mechanistic view, it suggested that the *organism* had ends, not just the observer. Unlike the spiritualists, the having of ends had perfectly naturalistic, organic origins. Thus, James evoked Darwin to account for the evolution of mind while viewing "the mental" as similar to a Darwinian process of variation and selection (as applied to the survival of possible lines of action).

This conception of the mental gave a way of seeing "mind" all the way up and down the scale of behavior, since it was a kind of function, not a thing. Even isolated parts of the spinal cord could control behavior with surprising adaptive ability, making them "mental" in function. They act to bring about certain sensed states of affairs, as in the example of a decorticated frog's rear leg reaching up to just the right place to wipe a drop of acid off its belly. In so doing the frog acts teleologically. It (or what remains of it) senses a state of affairs that its actions serve to modify in a "desired" direction. James concluded that: "All the nervous centres have then in the first instance one essential function, that of "intelligent" action. They feel, prefer one thing to another, and have "ends" (James, 1952/1890, 51). James viewed the nervous system as a whole as organized so that higher order centers (such as the cerebrum) modify the relations between lower order centers without intruding into the latter's operation, like officers giving commands to subordinates. In effect, the higher centers function as "an organ added for the sake of steering a nervous system grown too complex to regulate itself" (James, 1952/1890, 94). Today we might say that the brain and nervous system are organized like a cybernetic hierarchy.

James's account went a long ways towards integrating higher and lower orders of "mind."[10] It preserved continuity between the minds of higher and lower creatures, and between the evolutionary remains of this history in the neural systems in our own bodies. In neatly avoiding both the mechanistic and spiritualistic conceptions of "ends," James adopted a Darwinian way of mediating between mechanical and spiritual approaches to "design." He saw mind as a process of selecting among possible lines of action (ideas) on their basis of anticipated consequences. This view was not mechanical, because it assumed that mental agents have their *own* aims and are not just billiard balls pushed around by external objects. It was also not spiritualistic, since it supposed no soul or deity to do the anticipating or selecting. At other times, however, James fell back into the more conventional view that there are two types of *entity*, brain and soul, which causally interact with one another.[11] As

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the best of my judgment, the argumentation which applies to brutes holds equally good of men..." (cited in (James, 1952/1890, 86).

[10] James also argued that evolutionary changes altered the degree of specialization of these "centres" in different creatures. The relatively great split between higher and lower levels of mental functioning, evident in our elaborated brain and less flexible lower systems, is itself an evolutionary product. In this way James also found "continuity" between different species.

[11] "I confess...that to posit a soul influenced in some mysterious way by the brain-states and responding to them by conscious affections of its own, seems to me the line of least logical resistance, so far as we yet have attained...The bare phenomenon, however, the immediately known thing

Dewey pointed out, at the time that he wrote his Psychology he was still influenced by conventional thinking regarding the soul.[12]

The Stream of Thought

The second, phenomenological, part of James's psychology attempted to provide a view of subjectively experienced thought to parallel the first physiological discussion. Here he faced what were basically the same two sets of enemies. Associationist psychologists represented the mechanistic side of things. They thought that complex ideas were assembled out of elementary ideas which become associated in some mechanical fashion, such as through their occurring next to one another in time or space. This was an inheritance from the British empiricist tradition of Locke and Hume. Ego psychologists represented the spiritualistic side, thinking that a transcendental ego constituted its objects maleably from the vague flux of experience, an approach inherited from the rationalist tradition of Decartes and Kant. Essentially, the fomer were "objectivists, " who thought the immediate parts given, the latter "constructivists" who thought abstract relationships given. James's problem was how to retain the particularity of ideas suggested by the former and the universality emphasized by the latter.

James attacked this problem most directly in his famous chapter on the "stream of thought" (James, 1952/1890). Here he argued that subjective experience supports the notion that ideas are both individual and continuous. Every thought is individual in the sense that it is experienced as part of a personal consciousness, belonging to "concrete, particular I's and you's" (James, 1952/1890, 147). It is also unique and individual in that it can never be exactly repeated, since neither the brain nor the rest of the world will ever be the same again. On the other hand a thought is also experienced as continuous. Every thought seems to be an integral whole rather than a mechanical assemblage of separate parts (As James put it, "Our idea of a couple is not a couple of ideas."). It also seems to be flow smoothly into the next thought without apparent jar.

James accounts for these properties of thought by appealing to the metaphor of a stream or wave. He saw a relatively stable thought, like the thought of some object, as similar to a relatively stable wave-form in a pond. A kind of dynamic stability to such a wave, keeping its form relatively constant over some period of time. On the other hand, this wave is intrinsically related to other waves. For one thing, it is defined by the other waves around it. In similar fashion, each thought is surrounded by a fringe, or non-focal periphery, that constitutes the background against which the former is evident by way of contrast. Thus an individual thought is in a sense always part of a larger process involving "other" thoughts, other waves. Each individual wave may also be quite complex in structure even though it is not made up of separate atomistic parts. It is simply a complex pattern, with sub-patterns composing the larger pattern. By the same token, an individual thought might be a complex feeling or image whose pieces define each other and form a united whole, rather than a mechanical assemblage.

Thoughts can also be seen as interrelated in time, flowing into one another, just as waves are related to one another as they come in on the beach. After it peaks, each wave starts to lean into the next just as the next builds from the preceding one. Thus each wave helps make up the preceeding and succeeding waves, and has information about them evident in its form. In similar fashion, each thought flows into the next during the transitional phases when thoughts are changing. As James put it, changing metaphors, thought is something like a bird that flies from perch to perch. The dynamic phase involves the search for a new object while the perching involves the appreciation of a sought-for object. In effect, one fairly steady wave-form, which is itself formed by the interaction of a variety of waves, is transformed through an intervening variety of intermediate wave-forms into another relatively steady wave-form.

The point of this metaphor is that relationships between thoughts are present within every thought, which is, of course, not a separate or distinct thing, but a part of this whole dynamic set of oscillations. Indeed, in this model both objects and relationships have exactly the same standing, neither being more real than the other. Both are simply aspects of

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which on the mental side is in apposition with the entire brain-process is the state of consciousness and not the soul itself" (James, 1952/1890, 119). Since the soul was not knowable, James ended by suggesting that psychology study the parallelism of whole brain states and states of consciousness, without assuming that either causes the other.

[12] See Dewey's discussion of the "vanishing subject" in James's psychology (Dewey, 1946b).

waves, pulses, considered one way or another. As an example, imagine hearing a story read by someone who reads very well. In a good reading the storyteller modulates each sentence, giving it a tone that links it with what is coming. We *feel* the building suspense, the impending danger, as the story unfolds, an not only when the event actually occurs in the story. Evidence of what is coming is present in immediate experience.

This metaphor provides a way of seeing how both empiricists and rationalists could be wrong in what they viewed as obvious first assumptions. Empiricists (e.g., associationists) believed that thoughts were made of elementary pieces, and that the mind somehow combined these bits to make complex pieces, adding its own preferences to make secondary qualities. But James argued that no composition of unrelated bits is likely to give the flow or integration of thought that we experience. Rationalists believed this integration to be created by the mind, which formed things in terms of its own relations or a priori assumptions. But this explanation requires a new entity, the mind, soul, or ego, to do the integrative work, leaving the operation of *this* entity unexplained. If relationship is already in our thoughts or feelings, as is uniqueness, then no metaphysical entity needs to be postulated to relate or constitute things. As James put it, in his more parsimonious model, "the thoughts themselves are the thinker."

James went on to build a more complex psychology on this basis, including an analysis of the role of conscious attention in thought, a theory of the self which Mead later elaborated, and an influential theory of the emotions, the latter drawing directly upon Darwin's The Expression of the Emotions in Man and Animals, although modifying it (Darwin, 1904/1889).[13] The principle point for the present, however, is that James's stream or wave model of conscious experience gave a unified way of describing both the objects of thought and the relationships linking them. Both were viewed dynamically, rather than as static givens. As a result, psychology did not need to begin with already discriminated material objects or with already defined immaterial egos. It could begin with "pure" experience, out of which various discriminations emerge and are useful for different purposes.

Considered as a whole, James's psychology can be viewed as drawing upon a number of Darwinian themes. Probably the most important of these is the reversal of the traditional priority of being over becoming. In traditional thought entities take priority over processes. James, like Darwin, sought to reverse this emphasis and focus first on life processes and then see how the form of various entities emerged from these processes. To be more specific, James saw "mind" as a function, not a thing. It is a function which enables an organism to selectively respond to a situation, given its own needs or interests, not an entity. By adopting a functional rather than an entitative view, James was able to see aspects of minding in organisms with highly varied physiological structures, such as frogs and humans.

The same point applies James's analysis of the stream of experience in which he viewed various objects or relationships as emergent results of a process of discrimination, serving adaptive functions, rather than as given in elementary sensations or the "rules" of the mind. Like Darwin, he emphasized the emergence of form rather than its metaphysical givenness. Of course the whole metaphor of the stream of thought borrows from Darwin's notion of continuity or flow (which also became very important to Dewey). Thoughts are connected to one another, like species, without sudden saltations.

James also borrowed Darwin's notion of natural selection, applying it to the mind, or to the selection of ideas as well as of organisms. As he wrote, consciousness is "primarily a selecting agency." At the time the term "consciousness" was used rather widely to refer to virtually any form of feeling, and not specifically to self-consciousness, or the function of being conscious of consciousness. Even rather simple levels of consciousness, such as any sort of feeling that allowed the organism to act so as to prefer one state of affairs to another could then be seen as serving to select means for the attainment of ends, assuming a wide definition of having an "end."

The notion of populational thinking does not seem to figure so clearly in James's psychology. He emphasizes the "waves" and "pulses" of experience, but pays less attention to the possibility that these are dynamic and aggregated aspects of many

[13] James's discussion of a decorticated frog's behavior in The Principles of Psychology seems to have been drawn directly from Darwin's similar discussion, based on the work of Maudsley (Darwin, 1904/1889, 37).

individual neural firings. Nevertheless, the notion that thoughts are a more or less statistical matter, as well as the basic anti-essentialism of a populational approach, is retained.

James's Philosophy

It is only a short step from James's psychology to his philosophy. This is because all of his philosophy was heavily psychological in character, as evidenced in his emphasis on the emotional basis of philosophical commitments and his emphasis on the individual thinker.

James's philosophy was polemically opposed to the same two opponents that he addressed in his psychology, although they appear in somewhat different guise. Considered in epistemological terms, reductionists became the "tough-minded" empiricists James considered in Pragmatism (1963/1907), who sought to reduce human knowledge to elementary sensations. Their spiritualistic or holistic opponents were the "tender-minded" rationalists who viewed knowledge as constituted by an immaterial soul or ego. As James noted, the former tended to explain the whole by the part, the latter the part by the whole.

Pragmatism

James's pragmatism was largely an attempt to mediate between empiricism and rationalism (or reductionism and holism). As he put it, "Most of us have a hankering for the good things on both sides of the line...You want a system that will combine both things, the scientific loyalty to facts...but also the old confidence in human values and the resultant spontaneity, whether of the religious or of the romantic type." (James, 1963/1907, 9-10, 12).

His pragmatism consisted of two aspects: the "pragmatic method" and a "genetic theory of truth" (James, 1963/1907, 22-38). The pragmatic method was a way of avoiding fruitless disputes based on confused meanings: "The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to any one if this notion rather than that notion were true? If no practical difference whatever can be traced, then the alternatives mean practically the same thing, and all dispute is idle" (James, 1963/1907, 23). Differences that do not make a difference "in concrete fact and in conduct consequent upon that fact" are not meaningful differences (James, 1963/1907, 25). Viewed as method, pragmatism implied no particular dogma or conclusion. It was an attitude or orientation that suggested looking at differences in the practical consequences likely to follow from competing claims, or the lack of such, rather than the first principles on which such claims are based (James, 1963/1907, 27).

By a "genetic" theory of truth, James meant an evolutionary or developmental theory. He saw new truths as playing a "go-between function" connecting established truths to newer ones yet to emerge. The great use of a truth was "to summarize old facts and lead to new ones" (James, 1963/1907, 28). When old, taken-for-granted beliefs are disturbed, due to contradictions between old beliefs, or between an old belief and a new experience, a new idea is likely to be entertained to resolve the conflict. If the new belief "works," that is, if action can proceed on its basis and it proves consistent with established beliefs, as well as with beliefs coming afterwards, it *becomes* "true." As James put it, "The truth of an idea is not a stagnant property inherent in it. Truth *happens* to an idea. It *becomes* true, is *made* true by events. Its verity is in fact an event, a process" (James, 1963/1907,89). Thus a belief "makes itself true, gets itself classed as true, by the way it works; grafting itself then upon the ancient body of truth, which thus grows much as a tree grows by the activity of a new layer of cambium" (James, 1963/1907, 31).[14]

One might imagine James's theory of truth as suggesting that truth is determined like the guilt or innocence of the accused during a trial. If the hypothesis that the accused is innocent survives the evidence presented and the deliberation based on this evidence, then the hypothesis become "true," just as the accused becomes "innocent" or "guilty." However, James's conception is more individualistic than the trial metaphor suggests, the latter actually according better with Dewey's views. James wrote about what an *individual* is likely to accept as true, not a community (James, 1963/1907, 29). Since different individuals are likely to view the solution to a difficulty as satisfactory according to different criteria, "to a certain degree...everything here is plastic....When old truth grows, then, by new truth's addition, it is for subjective reasons" (James, 1963/1907, 30-31).[15] This

[14] "The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite, assignable reasons" (James, 1963/1907, 36).

[15] It worth noting that James was very consistent in applying the pragmatic method to his own conception of

subjectivism got James and his theory of truth into trouble, but rather than focusing on this controversy which has been considered in many other places, I would like to return to the relation between James's pragmatism and Darwinism.

James's conception of pragmatism can be seen as aligning easily with a Darwinian approach. James was explicit that his theory of truth was a "genetic" or evolutionary one. According to this view a true idea is like a species that survives and has descendants. Like the members of a continuing species the idea has withstood the tests of life. Of course one cannot know ahead of time which will succeed, so one needs to focus on the "fruits" or "consequences" flowing from an idea to see whether it is worthwhile. Old truths, like present bodily structures, have a role, too. They serve to support and lead on, aiding present functioning as well as helping to gain newer truths in the future (Compare with Lakatos and Musgrave, 1970). In short, the truth of a new proposition, like the goodness of an animal form, is to a considerable degree prospective.

The pragmatic method, which took differences in the meaning of beliefs to be due to their practical implications for action, rather than their formal structure, can also be viewed as similar to the notion that differences between species are defined on functional rather than formal grounds. If there is no functional difference between two organisms, despite some difference in form, then the apparent difference between them. Similarly, differences between assertions must have practical implications if they are to be considered meaningful.

Radical Empiricism

James's later philosophy, much of which appears in Essays in Radical Empiricism and A Pluralistic Universe (James, 1971), can be viewed as a fairly direct expansion of his earlier ideas.[16]

Radical empiricism was the notion that objects and relationships are equally present in experience. The claim that relationships are present in experience derived from James's earlier work on the stream of thought, although the point was generalized to construct a whole philosophical position out of it. According to James, there is only one basic "stuff" of which the universe is composed, "pure experience" (James, 1971,5). By "pure" experience, he meant the feelings or sensations one has prior to the recognition of things as percepts or their analysis in terms of concepts. A "pure" experience is likely when having a novel or engrossing experience in which one loses oneself in the overall flow. The primal stuff of pure experience contains everything, undifferentiated. Different parts of experience may then work with or against one another in certain ways, becoming "objects." Cognitive relations occur when one object leads to another. Experience may also split between subjective and objective aspects, as in James's theory of the self as interacting phases of "I" and "me." Thus different facets of experience by become differentiated, emerging from the overall flow.

"Radical empiricism" was a methodological postulate that suggested that we assume that everything we may feel or know about is available in experience: "Everything real must be experiencable somewhere, and every kind of thing experienced must somewhere be real" (James, 1971, 84). In other words, elements and relations are equally real, equally empirical: "Life is in the transitions as much as in the terms connected" (James, 1971, 46). That is, "the relations that connect any kind of relation experienced must themselves be experienced relations, and any kind of relation experienced must be accounted as 'real' as anything else in the system" (James, 1971, 25).

This doctrine provided a general way of criticizing both traditional empiricism and neo-Hegelian rationalism. Traditional empiricism held that there are some objects or elementary sensations that are given in experience, while relationships have to be added at a secondary stage by the mind. In effect, it was a philosophy for those who like to look through at the world through very small, standardized keyholes and then try to add up the pieces to make up a larger whole. But as James pointed out, one never has an "elementary" sensation. The little pieces presumed to be basic or elementary are actually the product of great discriminative training and effort. Thus, empiricism was not really "empirical" after all. It was actually highly metaphysical at its base, since it assumed, a priori, that things come chopped up in

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truth: "True ideas are those that we can assimilate, corroborate and verify. False ideas are those that we cannot. That is the practical difference it makes to us to have true ideas; that, therefore, is the meaning of truth, for it is all that truth is known-as" (James, 1963/1907, 89).

[16] Essays in Radical Empiricism was published after James's death although he pulled the essays together for this purpose in 1907. A Pluralistic Universe was published in 1909, a year before his death.

standardized bits.[17] In contrast, James's radical empiricism would take experience just as it is, full of both difference and ambiguity.

Neo-Hegelian rationalism viewed the universe and all of the historical sequences of human experience as the expression of a Divine Thought or plan. Everything was part of a rational sequence; all were parts of the universal whole. To the extent that human beings become aware of the direction in which Absolute Mind is leading they become (with Hegel) self-consciously one with the universe. In contrast to traditional empiricism this philosophy started from the whole rather than with sensed parts. However, it presupposed an unlimited or non-empirical knower. It had the arrogance to suppose that local, limited creatures like ourselves could know *the* ultimate direction and meaning of things. As James pointed out, it presupposed a given whole, which, being beyond our limited experience, was also a mere metaphysical invention.

Rather than the grandiloquent view of the rationalists, James suggested a more humble model of human beings as limited, situated knowers: "We may be in the universe as dogs and cats are in our libraries, seeing the books and hearing the conversation, but having no inkling of the meaning of it all" (James, 1971, 268). In other words, it is at least plausible that we capable of seeing only local and limited patterns. If this is so, then any claim about the ultimate pattern or meaning of history will be an hypothesis based on extremely limited data. Nor will it be the only hypothesis consistent with the data.[18] In assuming one meaning to the universe, one overall pattern, rationalism was as dogmatic and metaphysical as traditional empiricism.

Radical empiricism thus cut in between its two opponents. It widened the scope of empiricism so that the "empirical" consisted of all the sensations and feelings one has in a situation, and not just the standardized bits served up by a narrow methodology. In widening the "empirical" James's approach opened the door to such things as aesthetic feeling as real properties of objects.[19] On the other hand, radical empiricism narrowed the scope of knowing relative to rationalism by arguing that the knower is a concrete, situated, limited person. Any claim about the way the universe is that enters into one's interpretation must be recognized as based on limited experience and dependent on cognitive interests, and therefore as both hypothetical and partial.

The concept of radical empiricism related to James's earlier study of The Varieties of Religious Experience (James, 1958/1902) as well as to the stream of thought chapter in The Principles of Psychology. A radical empiricism open to the full range of human experience can study of religious experience as a contribution to psychological science, rather than limiting the "empirical" to that which is easily and reliably measured. Although many do not take it as such, James's study of religious experience was meant to be a contribution to psychological science. It included elements of personality psychology in his characterizations of religious personality types (the optimistic "healthy soul" and the pessimistic "sick soul") and analysis of conversion experiences. It also had elements of cognitive psychology, broadly conceived, in the discussion of the kinds of cognition involved in mystical experience. While this is often viewed as an example of James going off the deep end, it can at least as easily be seen as a serious attempt to contribute to the science of psychology by considering the limits of cognition when subject and object merge. It was an example of radical empiricism applied to psychology.

James's reaction to religion was similar to Darwin's in this regard. Traditional empiricists, like Herbert Spencer, trumpeted the certainty of science while throwing religion a bone by acknowledging that science had nothing to say about religious unknowables. Darwin, in contrast, was willing to directly tackle religious claims on an empirical basis, albeit a widened one, which is why he was the much greater threat to orthodoxy. For both James and Darwin certain issues might be quite undecidable in the present state of knowledge. However, there was no reason to draw a rigid

[17] Following this analogy, Dewey's and Mead's social behaviorism might similarly be regarded as a "radical" behaviorism. Dewey wrote somewhere that he had much in common with the behaviorists, since both were concerned with the consequences of behavior. Where they differed, Dewey went on to say, was that he was also interested in the consequences of *behaviorism* itself. I take this radicalization of behaviorism to be very similar to James's radicalization of empiricism.

[18] Imagine a number of data points drawn at various points in a coordinate system. A virtually infinite number of equations may be constructed going through those points. Thus the data are consistent with many "true" equations.

[19] James viewed feelings as ambiguously attributable to the subject who has them or to the object they are about.

demarcation line between science and non-science, or physics and metaphysics. Rather, there is a gradual transition from the relatively definite and certain towards the relatively ambiguous and uncertain. Empiricism need not limit itself to the former, although it should acknowledge the risks in reaching conclusions about the latter.

James's radical empiricism thus tried to break down the given boundaries between the objective and subjective or knower and known. Objects and relationships were both *in* experience, rather than one being external and the other internal. Darwin similarly gave equal billing to the form of species and their relationships of descent, each helping to define and identify the other. Although he did not coin the term, Darwin might be viewed as the earlier "radical empiricist."

A Pluralistic Universe

As Perry has noted, James's pragmatism gave him a method, his radical empiricism gave him a content (pure experience), and the result of applying the method to the content was a pluralistic universe.

James agreed with empiricism that experience is the sole source of knowledge and that experience is always bounded or partial. Since experience is always at least somewhat disjointed and unrationalizable, with stray facts that don't fit into current theories, it is "pluralistic" in the sense that things are not assumed to fit neatly into a given whole. On the other hand, James also agreed with the rationalists that the pieces of our universe are connected in various ways, and these connections are not always reducible to simple relationships like nearness in space or time. Things may be connected in various ways, some merely verbally, others by physical nearness or temporal sequence, still others by causal linkage, or intentional production, and so on. Often they are connected only indirectly through mediating links.[20]

The real issue from a pragmatic standpoint was not whether things natively come discrete or related, but their particular manner and degree of connection and the relevance of this relationship for particular purposes. Separations and connections between things need to be considered in functional terms rather than deciding ahead of time how they *must* be in some eternal or generic sense. As James put it, "a thing may be connected by intermediary things, with a thing with which it has no immediate or essential connection. It is thus at all times in many possible connections which are not necessarily actualized at the moment" (James, 1971, 275). The result of such partial and temporary relationships, which have limited relevance for varied purposes, is a pluralistic universe. It is one in which there are localized islands and moments of tight connection (or one sort or another), as well as places and times (and sorts) of disconnection. In a sense the universe is a multiverse. On the other hand, "Our 'multiverse' still makes a 'universe'; for every part, though it may not be in actual or immediate connection, is nevertheless in some possible or mediated connection, with every other part however remote" (James, 1971, 275). By leading one to focus on the practical connections between experiences, the pragmatic method resulted in a pluralistic view of the universe.

In a sense, James's notion of a pluralistic universe projected the situation depicted in his psychology onto the universe as a whole. If we are locally limited actors with bounded and imperfect knowledge who grow and have histories, then maybe the whole universe is like that. Maybe it is made up of a variety of agents whose interactions weave its tapestry. James's ultimate beliefs involved a pluralistic pantheism in which the universe is being created by a variety of agents, some human, some sub-human, some superhuman. He saw the world as alive, or spirited, and its form being woven by the interactions of numerous agents, almost like actions of the Greek gods. However, in this conception even the gods are finite and bounded: "The line of least resistance, then, as it seems to me, both in theology and in philosophy, is to accept, along with the superhuman consciousness, the notion that it is not all-embracing, the notion, in other words, there is a God, but that he is finite, either in power or in knowledge, or in both at once" (James, 1971, 269). This hypothesis James thought consistent with the facts of ordinary and pathological psychology, psychical research, and mystical experience (ibid., p. 268), all of which gave intimations of our belonging to some wider life. In other words, it was an "empirical" proposition in the wider, radical, sense. However, James always took this interpretation of the facts of mystical experience and the like to be hypothetical rather than dogmatic.

[20] See James's discussion of "The One and the Many" in Pragmatism (James, 1963/1907, 51-72).

Conclusions

James tackled the problems facing him by adopting an version of an evolutionary philosophy. Rather than taking the individual as a kind of standardized part to be assembled into various wholes, or taking the universe as a given whole defining each of its individual parts, James saw individuals as unique participants in the interactive process of composing the universe. In a sense, the most universal thing about individuals is the fact that they have lives and histories that they weave in common.

Seen in this way, the universe is conceived in terms of a "social analogy" in which there is "plurality of individuals, with relations partly external, partly intimate, like and unlike, different in origin, in aim, yet keeping house together, interfering, coalescing, compromising, finding new purposes to arise, getting gradually into more stable habits, winning order, weeding out" (Perry, 1935, 295). In other words, the universe is pluralistic and unfinished, and is transformed by the actions of its inhabitants, much as biological evolution is worked out in interactions among individuals belonging to different species. In this view individuals have the role of adding their unique contributions to the course of events. We may hope for great things, strive for high ideals, commit ourselves to unproven beliefs, yet should recognize our humble roles in the process and the uncertainty about the longer run truth or value of our beliefs. We can propose, but the universe, (which is partially composed by us) disposes. This view of the role of the individual in the universe is a strenuous one going against the desire for certainty and security, but it had the value of serving to make moral action meaningful. For James, it was what made life worth living.

While James's vision of the role of the individual in the universe was in many ways consistent with a Darwinian one, he differed from Darwin in positing superhuman individuals--gods--partaking in this process. One *could* try to naturalize James's conception of these deities to make the two visions more consistent with one another. For instance, one might see our minds as products of wider social and cultural movements, as did Durkheim (1965). These wider social interactions help to compose superhuman entities (societies) which Durkheim saw as analogous to gods and as the true object of religious belief. Alternatively, one could see us, as Bateson did, as parts of complex ecologies whose adaptive behavior constitutes a higher order mind (Bateson, 1972; Bateson, 1988). For Bateson, for example, a rain forest is a kind of mind. At this point, however, James would probably want to part company with his (somewhat) more naturalistic brethren, and cling to the notion of a superhuman deity, however finite. That he did so as an hypothesis rather than a dogma was greatly to his credit. However, the tendency to do so also shows the continuing influence of pre-Darwinian thinking on him, in which there is an emphasis on given entities rather than activities. Despite his criticism of thinking based on such entities it seems that James could not get beyond their appeal.

While much of James's work may be viewed as built around Darwinian themes, and I would suggest that the center of James's vision was a Darwinian one, there were clearly other important themes. One of the most important of these was James's (and his father's) non-institutional deism. Thus another source of the "social analogy" of the universe may have been the James family's own dynamics.

The significance of James's (and Darwin's) thought for today seems to arise in two principal areas relating to the two facets of his central problem. In James's time there was a tension between reductionists (empiricists and materialists), who viewed everything as made of given parts, and holists (idealists and rationalists) who thought everything constituted by given wholes. Today there is a similar battle between those who take individuals as mentally comparable along common dimensions, such as IQ scores, and those who take different groups of people as fundamentally incomparable because of differences in their cultures. James's thinking suggested that if one looks at an actual situation in which people are engaged both individuality and commonality are likely to be concretely present. Individuality is apparent in the practical distinctiveness of people's behavior in a situation, such as their unique contributions to the activity. Commonality is evident from the common function of their diverse contributions, such as their usefulness in achieving a joint aim. This conception takes the situation, or, for James, the concrete "experience," as the whole. Empirically real individuality and commonality can then be identified, rather than artificial individuality or commonality based on a priori assumptions regarding the comparability or incomparability of people. While Dewey worked out this line of thought more fully than James, the

latter would have concurred in a similarly dynamic and functional analysis. Needless to say the same analysis would also suggest the empty metaphysical nature of the debate between quantitative versus qualitative research.

A second area in which James's thought can be useful today derives from his ideas about freedom and determinism. In James's time idealists tended to give a large role to freedom of volition, viewing the world as created by the intentions of God. Materialist saw things as determined by material conditions or the laws discovered by science. There tends to be a similar split today. To a considerable degree, social science and educational theory are built on deterministic assumptions. Genes, habits, or institutionalized structures are viewed as destiny. Alternatively, there is often inordinate faith in thought or will itself, such as belief in teacher expectations to change student outcomes, the constructivist notion that the world is made up in one's head, or the use of rational actor theory in general in the social sciences. Of these two attitudes, James was particularly incensed by determinism and the fatalistic attitude that it engendered. As he put it in a criticism of Spencer,

> ...I...cannot but consider the talk of the contemporary sociological school about averages and general laws and predetermined tendencies, with its obligatory undervaluing of the importance of individual differences, as the most pernicious and immoral of fatalisms. Suppose there is a social equilibrium fated to be, whose is it to be,--that of your preference, or mine? There lies the question of questions, and it is one which no study of averages can decide. (James, 1956, 261-262)

Past regularities are not the same as future ones, particularly in social affairs where our actions together *make* the regularities. Novelty, irregularity, and randomness are possible. At times, James seems as though he believed that thinking makes it so. Certainly he believed in the role of belief in altering action. Believing that one is likely to succeed in some act affects the way in which one acts, thereby altering the outcome. While James may have polemically overemphasized this fact at times, he thought that both free willists and determinists adopted metaphysical assumptions about the character of the world without thinking about the consequences of their own beliefs. One assumed everything is easy, the other that it is hard. James's more social view suggested that we play parts in many dramas, but not the sole parts. Viewing things pluralistically can aid action by suggesting that we identify the specific character of our parts in a situation, and the ways in which it interacts with those of others. This allows for a more realistic recognition of what one is up against, and of the potential allies available to help in changing it. A more "social" educational theory might similarly help in avoiding the pitfalls of both rule by fiat and fatalistic determinism. Such an more social educational theory would not provide the certainty sought by either approach, but it would likely be more helpful in nurturing desirable forms of education.

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